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| 09/634,755 | 08/08/2000 | Ronald Coleman | CITI0168 | 4348 |
| 75127 7590 01/21/2011 KING & SPALDING LLP (CITI CUSTOMER NUMBER) ATTN: Eric Sophir 1700 PENNSYLVANIA AVENUE, NW SUITE 200 WASHINGTON, DC 20006 | | | | |
| EXAMINER | | | | |
| WINTER, JOHN M | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 3685 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Citi_Docket@kslaw.com

Office Action Summary

Application No.

09/634,755

Applicant(s)

COLEMAN ET AL.

Examiner

JOHN M. WINTER

Art Unit

3685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-15, 17-20 and 29-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-15, 17-20 and 29-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-SB-06)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Acknowledgements

1. The Applicants amendment filed on October 25, 2010 is hereby acknowledged, Claims 11-15, 17-20 and 29-42 remain pending.

Response to Arguments

2. The Applicant states that Vaidyanathan does not assess the credibility that changes to the input data is the result of an error.

The Examiner responds that Vaidyanathan et al ('287) discloses "The fitness function provides a measure of information-richness by examining the distribution of output states over the input feature subspace. If the output states are highly clustered and separated over this subspace, the fitness function should result in a high value as the corresponding input feature combination is doing a good job in segregating the different output states"(Column 12, lines 50-65) The Examiner submits that the Fitness function as disclosed by Vaidyanathan et al represents the amount of error contained in a data set, Examiner notes that the claimed limitation is directed towards "assessing credibility" The Examiner therefore submits that the "fitness" function of Vaidyanathan et al is an assessment of the ratio of correct output from a given input and therefore teaches the claimed limitation of assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors.

Examiner notes that the rejection of claim 30 in view of Masch has been withdrawn

The Applicant states that Huh's error rate is not the same as a likelihood or a confidence level. Huh's "error rate" determines how many errors occurred, not whether a change was a result of an error.

Examiner states that Huh discloses the user marking changes as spurious operational errors and storing the information in a database. The Examiner submits that this teaches the claimed feature of "determining information content of the input data", furthermore Huh discloses determining via statistical analysis what operational processes incurs the most errors which teaches the claimed feature of "performing a statistical analysis of the information content relative to the one or more historical values"; (see column 4, lines 36-67 and column 5, lines 1-11)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-14, 17-20, 29-34 and 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reboh et al., (US Patent No 4,866,634) in view of Hedstrom et al. (US Patent 6,477,471) and further in view of Vaidyanathan et al (US Patent 6,941,287).

4. As per claims 11, 14, 30, 41 and 42

Reboh et al. ('634) discloses a computer-implemented method comprising:

receiving by a computer a set of input financial data; (Column 4, lines 18-23)

storing by a computer one or more historical values, each historical value representing a previous set of input financial data; (Column 4, lines 24-34)

Reboh et al. ('634) does not explicitly disclose performing by a computer a mathematical calculation using the information content of the input financial data and the information content of the one or more historical values and presenting by the computer a confidence level that a change between the information content of the input financial data and the information content of the one or more historical values is caused by an error. Hedstrom et al. ('471) discloses performing by a computer a mathematical calculation using the information content of the input financial data and the information content of the one or more historical values and presenting by the computer a confidence level that a change between the information content of the input financial data and the information content of the one or more historical values is caused by an error; (Figures 4 and 5, Column 3, lines 19-36 – confidence level corresponds to “goodness” prediction). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the Reboh et al method with Hedstrom et al. ('471) method in order to reduce the cost of error correction in databases by providing a simple and inexpensive process to ensure the quality of the data being processed.

Reboh et al. ('634) does not explicitly disclose assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors.

Vaidyanathan et al ('287) discloses assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors (Column 13, lines 23-51 – the “fitness” or the data is representative of it’s accuracy [i.e. error free], column 40, line 19-50 discusses application of process to financial data). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the Reboh et al., in view of Hedstrom et al.’ method with Vaidyanathan et al ('287) method in order to reduce the cost of error correction in databases by providing a simple and inexpensive process to ensure the quality of the data being processed.

5. As per claims 15, 33 and 38,
Reboh et al. ('634) discloses the system of claim 14,
Official Notice is taken that “displaying an icon indicating an error” is common and well known in prior art in reference to statistical analysis. It would have been obvious to one having ordinary skill in the art at the time the invention was made that an error would cause the user to be notified.

6. As per claim 17,
Reboh et al. ('634) discloses the system of claim 11,
Official Notice is taken that “the statistical analysis is performed by calculating the Shannon entropy” is common and well known in prior art in reference to statistical analysis. It would have been obvious to one having ordinary skill in the art at the time the

invention was made that the statistical analysis is performed using Shannon entropy because this is a standard technique that is well known and found in any statistical analysis textbook.

As per Claims 18-20, 29, 32 and 39 and 40,

The prior art teaches a method of statistical analysis, but not the process of non-parametric resampling statistics, Bayesian statistics or parametric statistics ". However, since these probability and statistics processes are old and well known in the field of art and thus is no more than the simple substitution of one known element for another it would be obvious to one of ordinary skill, would be to use statistical and probability tools such as non-parametric resampling statistics, Bayesian statistics or parametric statistics in order to perform statistical analysis. Ex parte Smith, 83 USPQ2d 1509 (Bd. Pat. App. & Int.

7. Claims 12, 13, 34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reboh et al., (US Patent No 4,866,634) in view of Hedstrom et al. (US Patent 6,477,471) in view of Vaidyanathan et al (US Patent 6,941,287) and further in view of Masch (US Patent 5,930,762).

8. As per claim 12,
Reboh et al. ('634) discloses the method of claim 11,
Reboh et al. ('634) does not explicitly disclose the input data includes financial data feeds from one or more data processing systems. Masch ('762) discloses the input data includes

financial data feeds from one or more data processing systems;(Column 2, lines 21-34) It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al. in view of Hedstrom et al. in view of Vaidyanathan et al with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

9. As per claims 13 and 36,
Reboh et al. ('634) discloses the method of claim 11,
Reboh et al. ('634) does not explicitly disclose the input data includes financial data calculated by a financial risk management system. Masch ('762) discloses the input data includes financial data calculated by a financial risk management system;(Column 2, lines 21-34). It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al method with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

10. As per claim 34,
Reboh et al. ('634) discloses the method of claim 30,
Reboh et al. ('634) does not explicitly disclose classifying the difference between the first information content and the second information content using a plurality of categories that correlate to odds that the difference is an error in the inputted financial data. Masch ('762) discloses classifying the difference between the first information content and the second information content using a plurality of categories that correlate to odds that the difference

is an error in the inputted financial data. (Column 32, lines 36-55). It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al method with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

11. As per claim 37,

Reboh et al. ('634) discloses the method of claim 30,

Reboh et al. ('634) does not explicitly disclose determining whether a variation in the inputted financial data is greater than a current mark to market or a maximum likely increase in value.

Masch ('762) discloses determining whether a variation in the inputted financial data is greater than a current mark to market or a maximum likely increase in value.(Column 12, lines 19-32). It would be obvious to one having ordinary skill in the art at the time the invention was made to combine the Reboh et al method with the Masch ('762) method in order to generate a sufficient amount of data to achieve statistical accuracy.

12. Claims 35, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reboh et al., (US Patent No 4,866,634) in view of Hedstrom et al. (US Patent 6,477,471) and further in view of Huh (US Patent 5,396,612) and further in view of Nawrocki.

As per claims 35, 41 and 42,

Reboh et al. ('634) discloses a method for detecting abnormalities in input data to a financial risk management system, the method comprising:
receiving by a computer a set of input data to a financial risk management system;
(Column 4, lines 18-23)

Reboh et al. ('634) does not explicitly disclose receiving by the computer one or more historical values, each historical value representing a previous set of input data; Hedstrom et al. ('471) discloses receiving by the computer one or more historical values, each historical value representing a previous set of input data; (Figures 4 and 5, Column 3, lines 19-36 – confidence level corresponds to “goodness” prediction). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the Reboh et al method with Hedstrom et al. ('471) method in order to reduce the cost of error correction in databases by providing a simple and inexpensive process to ensure the quality of the data being processed.

Reboh et al. fails to teach preparing a report by the computer; wherein calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: determining information content of the input data; performing a statistical analysis of the information content relative to the one or more historical values; Huh et al. teaches preparing a report by the computer; (see column 3, lines 27-33) wherein calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: determining information content of the input data; performing a statistical analysis of the information content relative to the one or more historical values; (see column 4, lines 36-67 and column 5, lines 1- 11). It would have been obvious to one

of ordinary skill in the art at the time of the invention to incorporate this feature into the method of Reboh et al. One of ordinary skill in the art would have been motivated to incorporate this feature for the purpose of determining the root cause of the problems to decrease the error rate (see column 5, lines 6-11 of Huh et al.)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN M. WINTER whose telephone number is (571)272-6713. The examiner can normally be reached on M-F 8:30-6, 1st Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Calvin Hewitt can be reached on (571) 272-6709. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMW

/Calvin L Hewitt II/
Supervisory Patent Examiner, Art Unit 3685